

## NEW DESCRIPTIONS

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## A NEW SPECIES OF KRAIT OF THE GENUS *BUNGARUS* DAUDIN, 1803 [SERPENTES: ELAPIDAE] FROM THE ANDAMAN ISLAND<sup>1</sup>

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(With four text figures)

### INTRODUCTION

In course of a study of the reptiles of Andaman and Nicobar Islands in the collections of the Zoological Survey of India we came across four specimens identified earlier as *Bungarus caeruleus* (Schneider) and which showed marked differences from *B. caeruleus* and are now being described as of a new species.

#### ***Bungarus andamanensis* sp. nov.**

*Description* : Head not distinct from neck; eye with round pupil diameter more than half the distance of eye and the nostril; nostril between two nasals; rostral broader than long; internasal broader than long and shorter than

prefrontal; prefrontal broader than long, length more than half its breadth, touches internasal, postnasal, preocular and supraocular; frontal slightly shorter than its distance from the rostral and touches six shields, excepting frontoparietal all subequal to frontal; frontoparietal largest; no loreal; one preocular in contact with posterior nasal, two postoculars; width of supraocular more than half its length; temporal 1 + 2; 7 supralabials, 1st and 2nd touching nasal, 3rd and 4th in contact with eye, 2nd decidedly narrower than 3rd, 5th highest touching postocular and anterior temporal, 6th largest and broadest and touching anterior temporal; 7 infralabials, 1st longer than 2nd and 3rd, these touch anterior genial, 4th in contact with posterior genial, 6th longest;

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anterior genial longer than posterior; dorsal scales smooth and shining, in 15 rows; vertebral series strongly enlarged, broader than long and also broader than the scale of 1st row, ventral 194; anal undivided; subcaudal 47 and undivided; tail thick, ends in a blunt point.

Dorsal coloration of preserved specimen in spirit, chocolate or reddish black, lustrous and shining; 44 white linear arches or bars across back and 12 on tail, arranged equidistantly; bars complete dorsally, mottled with brown, laterally expand abruptly; top of head chocolate fading to white on the lip, belly glazed white, anterior and lateral margin of ventral scales tinged with brown.

registered on Jan. 1944. Reg. No. 14628, Andamans, collected by Major A. R. Anderson, registered on Jan. 1947.

*Remarks:* The entire collection of *Bungarus caeruleus* (Schneider) in the Zoological Survey of India consisting of 51 specimens, 4 from Andaman Island and rest from different parts of India were examined, but the four specimens from Andaman having ventral from 193 to 197, subcaudal 45 to 47, complete and equidistant body cross-bars from 39 to 47 and the tail bars from 9 to 13 maintain a uniform distinction from the mainland specimens of *Bungarus caeruleus* which have ventral count from 200-217, subcaudal 33 to 52, 29 to 65 cross-bars in pairs and tail bars 4 to 27. Moreover

Measurements (in mm) and count:

	Holotype 20895/1	20895/2	Paratypes 2897	14628
Snout to vent	600	410	222	184
Vent to tip of tail	115	77	41	34
Total length	715	487	263	218
Total length/tail	5.2	5.3	5.4	5.4
Head length up to parietal	19	11.5	8.5	8
Head breadth at broadest	16	9.5	6.5	5.5
Diameter of eye	2.5	1.8	1.5	1
Eye to snout	6.3	4.6	2.5	2
Eye to nostril	3.5	2.8	1.5	1.2
Number of ventrals	194	192	197	193
Number of subcaudals	47	45	46	45
Dorsal scales	15	15	15	15

*Material examined:* Holotype Zoological Survey of India, Reg. No. 20895/1, Port Blair, S. Andaman; collected by A. Bayley de Castro, 18 June 1926.

Paratypes: Zoological Survey of India, Reg. No. 20895/2, Port Blair, S. Andaman, collected by A. Bayley de Castro, 18 June 1926. Reg. No. 2897, Andaman, collected by R. C. Tytler,

some of the anterior body cross-bars from 2 to 15 are dorsally incomplete. The body to tail ratio in the present species is 5.2 to 5.4 whereas in *caeruleus* it is 8.

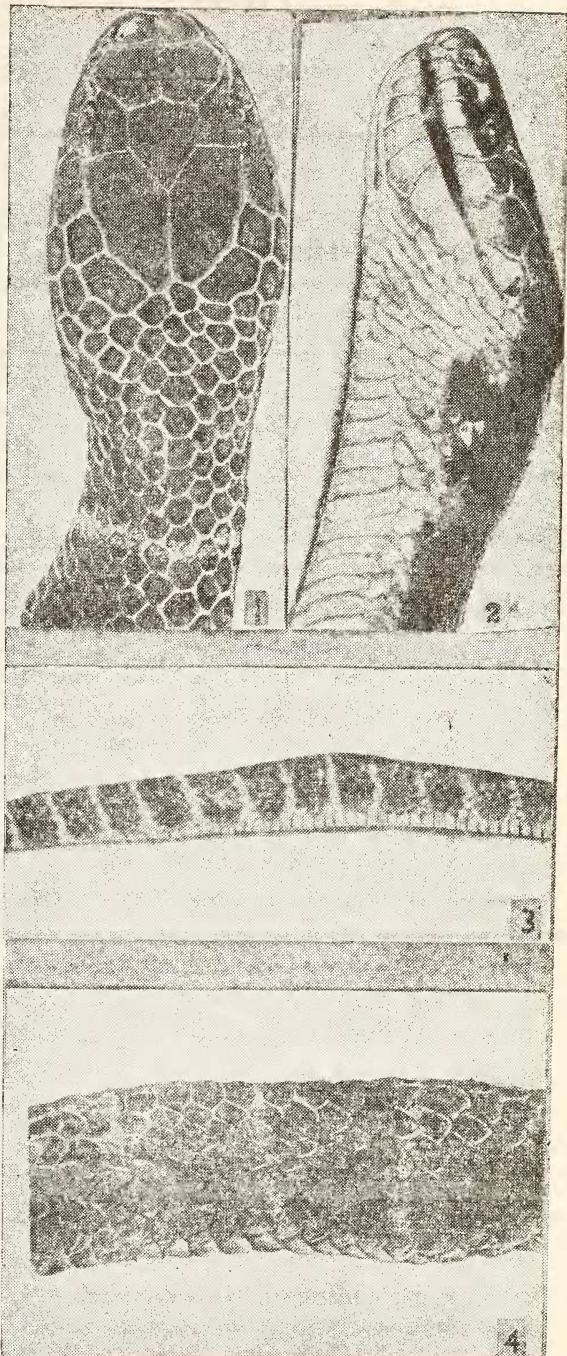
Wall (1908) was not able to correctly decide the status of the Andaman specimen because he examined a juvenile specimen of Zoological Survey of India (a specimen from

Indian Museum, pl. viii, fig. 4) and assigned this specimen to *B. multicinctus* (Blyth) lowering the ventral count of this species from 219-236 to 194-218 though the specimen differs from the *multicinctus* not only in the ventral count but also in other characters, such as 2nd supralabial not decidedly narrower than the 3rd, in the disposition and arrangement of colour bars, body to tail ratio and in having a different geographical distribution.

Smith (1943) also noticed these differences in the six specimens he examined from Andaman and noted correctly the characters as "scales in 15 rows throughout, V.192-200, C.40-46. Black above, with narrow white equidistant cross-bars, 40-46 in number on body; these are equally distinct throughout body, and have no vertebral spots" but he thought these differences are due to juvenile condition of the specimens and brought them under the broad range of scale count, dorsal 15 to 17, ventral 194-234, caudal 42-52 along with the specimens of *B. sindanus* (Boulenger [17 dorsal, vertebral not broader than long, V.218-237, C.48-52] which has got a valid claim of a distinct taxonomic status, but according to Smith the claim is untenable due to their common geographical distribution and variation of characters.

Smith's above quoted observation was no doubt correct, but he was also misled like Wall in assigning the Andaman specimens to *B. caeruleus* as he examined only the juvenile specimens in the collections of the Zoological Survey of India, instead of the adult.

The juvenile or young specimens appear markedly different from the adult coloration. Though the body bands in juvenile (Fig. 3) are equidistant, the body colour is very prominent and uniformly chocolate without the mottled marking within the white bars as in the Holotype. The latero-ventral ends of the



white bars also spread abruptly.

The comparative chart of different characters of 5 species from the Indo-Malayan region

given below show the gradual differentiation of characters within the *caeruleus* species complex:

Characters	<i>B. andamanensis</i>	<i>B. caeruleus</i>	<i>B. candidus</i>	<i>B. multinctus</i>	<i>B. ceylonicus</i>
Ventrals	192-197	200-217 (234)	209-219	209-228	219-236
Subcaudals	45-47	33-52	40-50	44-54	32-42
2nd supralabial decidedly narrower than 3rd.	yes	As broad as the 3rd	?	No.	yes, also narrower than 1st.
Body bands	39-47	29-65	20-25	27-48	15-21
Tail bands	9-13	4-27	7-10	7-13	2-5
Coloration and band arrangements	Equidistant, compete, narrow white bars and wider on the sides comparatively less and abruptly, bars are mottled.	In pairs, narrow on the vertebral line wider on the sides; broken up into spots, some anterior bars incomplete.	Black body, bars on the fore part of body narrower than interspecies, on the hinder part about same width.	Bars on the fore part of body further apart from one another than on hinder part, median portion of each bar may be spotted black.	Alteranate black and white bands which encircle body. In old specimens dorsal white bands tend to reduce to vertebral spots or sometimes disappear.
Measurement of largest (Body + tail)	600+115 mm	1200+150 mm	1070+135 mm	1100+145 mm	1000+95 mm

KEY TO THE SPECIES *Bungarus* BELONGING TO THE *caeruleus* GROUP OF SPECIES

- A. Scales in 15 rows.
- B. Subcaudals entire throughout.
- C. Vertebrales strongly enlarged, as broad as or broader than long.
- D. Tail ending in a point, dorsal vertebrae not forming a ridge down the back.
- E<sub>1</sub> Belly uniformly white.
- Back uniformly black above, C.49-56.....  
*B. niger* Wall. (E. Himalayas and Assam)
- F<sub>1</sub> Bands are arranged in pairs.
- Back with 27-48 white cross-bars;

- V.200-217, C.33-52. . . . .
- B. caeruleus* Schneider. (India & Sri Lanka)
- F<sub>2</sub> Bands are not arranged in pairs.
- 1. Back with narrow white cross-bars, arranged equidistantly; V.192-197, C.45-47.  
*B. andamanensis* sp. n. (Andaman only)
- 2. Back with bars on anterior part further apart from one another than on hinder part; V.209-228, C.44-54 . . . . .  
*B. multinctus* Blyth. (Burma, Indo-China, S. China)
- 3. Bars on the fore part of body narrower than interspaces, on the hinder part about same width.

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Back of tail with 20-25 broad white cross-bars, median part of each bar spotted with black; V.209-229, C.40-50 . . . . .

*B. candidus* (Linn.). (Thailand, Malay Pen. and Indonesia)

E<sub>2</sub> Belly with black marks or cross-bars, sometimes absent in juvenile.

1. Back with 15-21 white cross-bars, 2-5 tail bands. V.219-236, C.32-42. . . . .

*B. ceylonicus* Gunther. (Sri Lanka only)

2. Back with 11-14 very broad, white, black-

spotted cross-bars; V.214-235, C.40-48.

. . . . . *B. magnimaculatus* Wall and Evans. (Burma only)

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## STUDIES ON INDIAN FILISTATID SPIDERS (ARANEAE: ARACHNIDA)<sup>1</sup>

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(With two text-figures)

## INTRODUCTION

Since the classical work of Pocock (1900) and the earlier contributions of other European arachnologists on Indian spiders, no reference has been made about the occurrence of filistatid forms from India. The earliest record was by Thorell (1895) from Burma with a description of a new species *Filistata zebrata*. Simon (1911) described *F. nigra* from Madura, India; now confirmed by Benoit (1968) as *Sahastata nigra*. Recently Tikader (1963, 1977) described two and Patel (1975) described one species of the genus *Filistata* Latr. from India. Recently (May, 1977) I studied the type spe-

cimens of *F. poonaensis* and *F. nicobarensis* from the Zoological Survey of India, Poona and found that both species belong to the genus *Pritha*. The conclusion of Lehtinen (1967) that *F. poonaensis* Tikader, is a species of *Pritha* is thus confirmed.

Filistatidae is a family of Cribellate spiders, living in dark places, particularly in crevices of houses, wood and also under stones. Only one genus, *Filistata* was known which was considered to have world wide distribution. Mello-Leitao (1946) described some more Neotropical genera and summarized the characters of the known genera. Recently Lehtinen (1967) clearly separated four more genera *Andoharano*, *Kukulcania*, *Zaitunia* and *Pritha*, and redefined the genus *Filistata*, limited in distribution to areas south of the Palaearctic region. According to Benoit (1968) the first three

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